



It's not OGRE~nomics Anymore

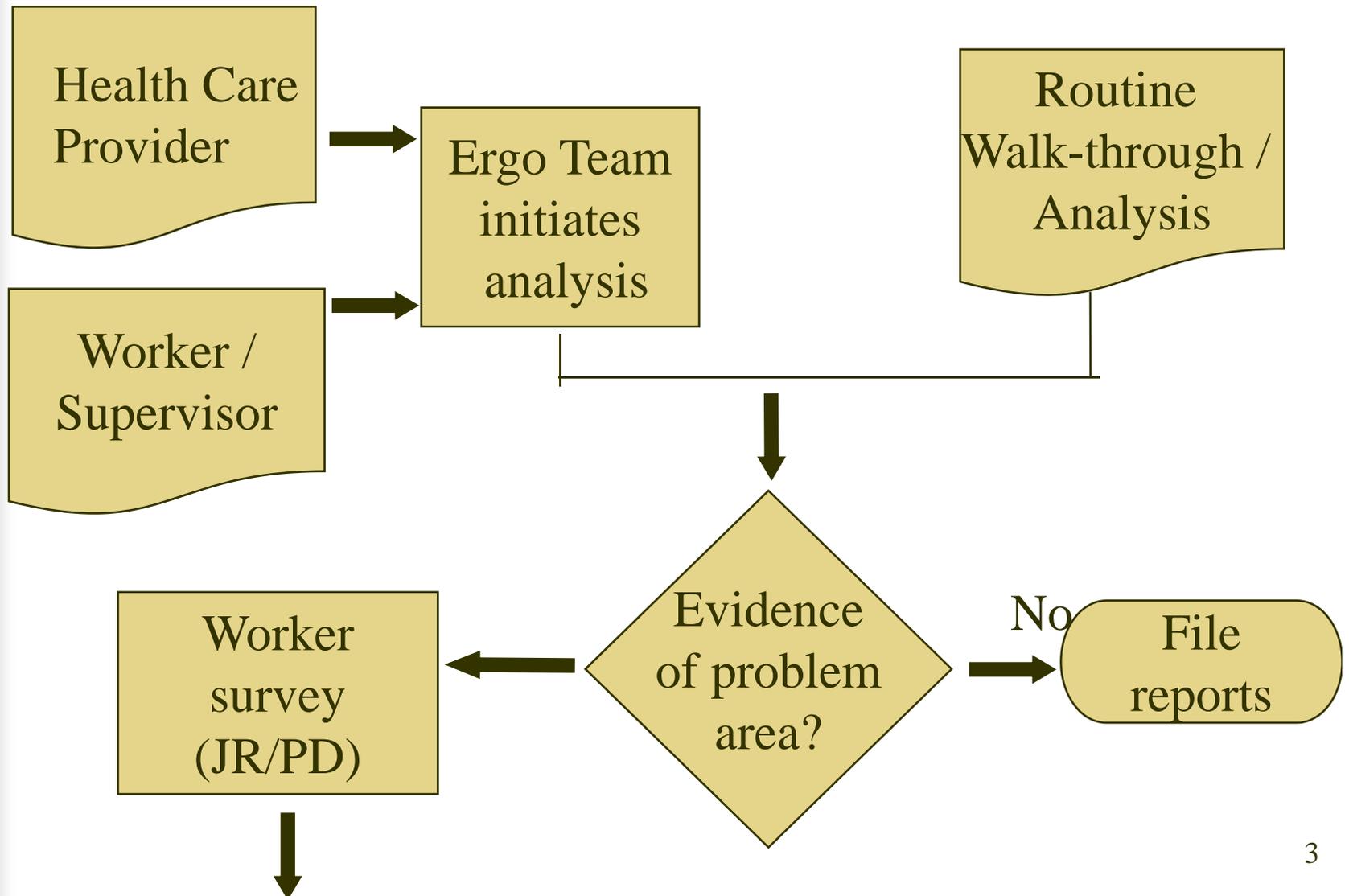
LTC Mary Lopez, PhD CPE
Chair, DOD Ergonomics WG
IH Forum 4 June 2001



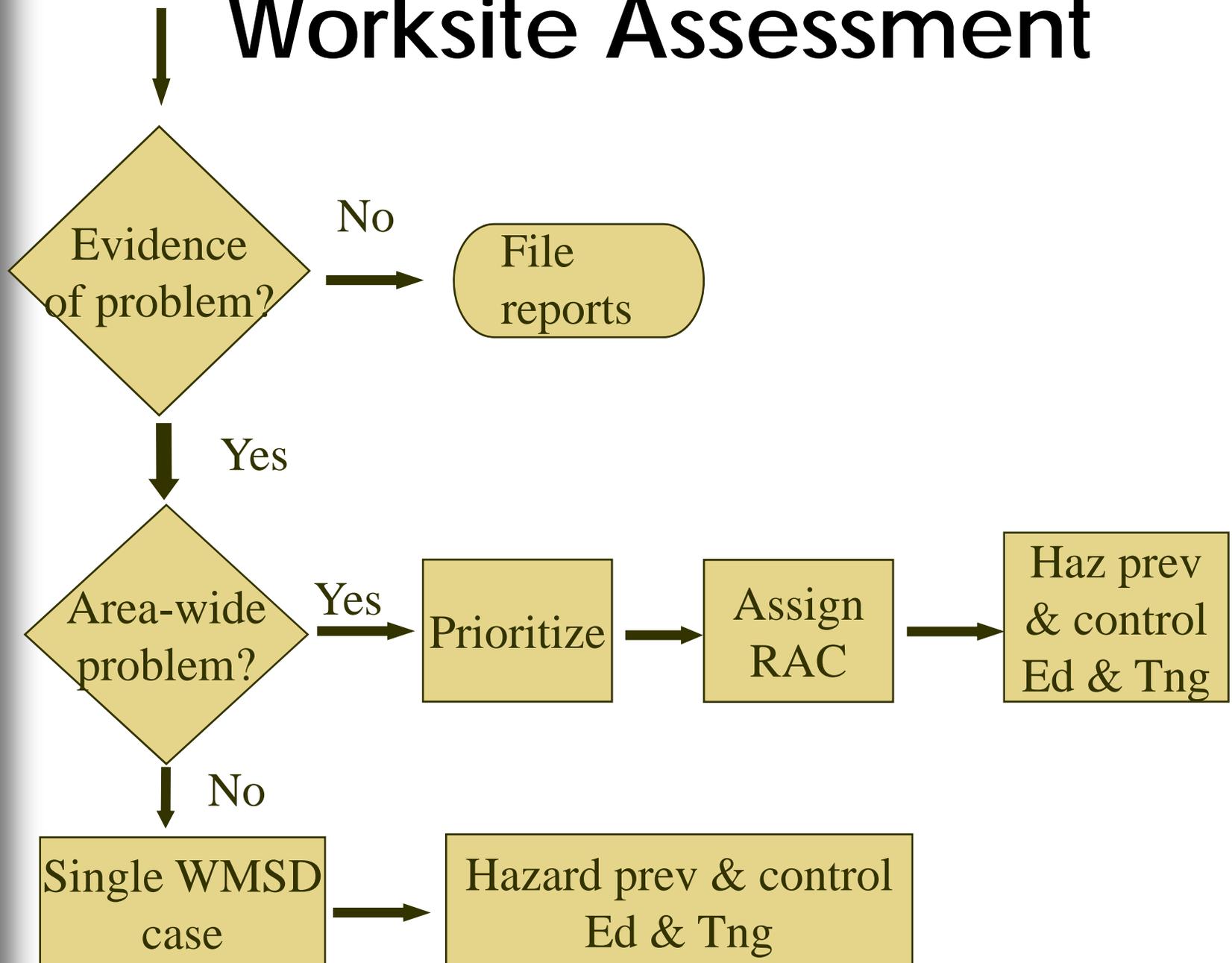
Worksite Assessment

- **Key activity in overall program**
 - **Focuses hazard prevention and control efforts**
 - **Establishes baseline**
- **Primary question: What tool to use?**

Key Element: Worksite Assessment



Worksite Assessment





Tool Selection

How to Decide??

- **Type of work**
 - Office, industrial, health care, assembly, laboratory
- **What we know (JR/PD focus)**
 - Risk exposure, body part, medical history, type of work tasks, open-ended questions

How to Decide??

- **Purpose**
 - **WMSD response, return to work, compliance, acquisition, controversial claim, specific workstation or task concern**
- **Who**
 - **Level of expertise (technician vs IH)**
- **Time available**
 - **What level of detail is needed?**

WMSD Response

****Focus****

- **Know: JR/PD information**
- **Consider: Type of work**
 - Limited task variability (grocery clerk)
 - High variability / demand driven
- **Process:**
 - Identify SEG
 - Ask the experts
 - Physically demanding, frequently performed tasks
 - Problematic tools, equipment, workstations



Return to Work Single Case

- **Health care coordination**
 - **Diagnosis and prognosis (grading)**
 - **Current and projected capabilities:**
 - **Posture and Motion**
 - **Force**
 - **Speed (repetition)**
 - **Duration**
 - **Special considerations (vibration, compression)**



Return to Work Single Case

- **Focused assessment and modifications**
 - Task, workstation, tools & equipment
 - Same assessment process and tools but use individualized criteria and thresholds
- **Monitoring and graded modifications**
 - Continued coordination



Tool Options

Descriptive Approach

- **Risk Factors and Body Part Affected**
 - Posture
 - Repetition
 - Force
 - Vibration
 - Temperature
 - Compression
- **Level of exposure**
- **Duration and frequency of exposure**



Tool Options

Descriptive Approach

- **Focus**

- Risk factors / body parts with highest severity, frequency and duration
- Active duty issue
 - Overuse injuries vs traumatic injuries
 - Role of physical training

- **Root Cause Analysis**

- Assess underlying causes
- Target interventions

Tool Options Checklists

- **Purpose**
 - **General description / focusing**
 - **Focused attention on specific problem area or component**

- **General Description ('Big Picture')**
 - **Level 1 Guides and Case Studies**
 - **Technical Guide checklist**
 - **Washington State checklist**

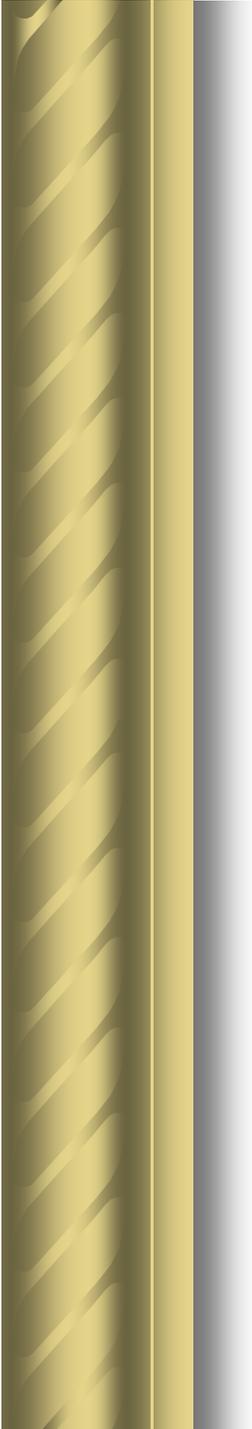


Tool Options: Checklists - Focused Attention

- **General Type of Work**
 - Office checklist
 - Materials handling checklist
- **Specific Areas of Concern**
 - Chair feature checklist
 - Handtool checklist
- **Self-Administered Checklist**
 - Intra-net web based VDT checklist
 - Release date: End of summer 2001

'Sensitive' Assessments

- **Require greater depth, specificity, thresholds, research basis**
 - **Compliance, litigation, acquisition**
- **MIL STD 1472**
 - **Material Handling**
 - **Lift and carry thresholds**
 - **Considers: gender, frequency, load size, obstacles, number in team**
 - **Tools, equipment, space, force, torque**



'Sensitive' Assessment Other MMH Tools

- **NIOSH Lift Equation**
 - Applicability
 - Limitations
 - Targeting and 'what if' value
- **Psychophysical Tables**
 - Lift, push, pull, carry by gender
 - Automated tool - releasing SEP 01
- **ACGIH - coming soon**

'Sensitive' Assessments

- **VDT Assessments**
 - **ISO Standard**
 - Revising computer program
 - **ANSI Standard**
 - Inclusion when (if) revision completed
- **Vibration**
 - **ISO / ACGIH TLV**
 - **Washington State tool**
 - **Manufacturer specifications**



'Sensitive' Assessments Research Tools

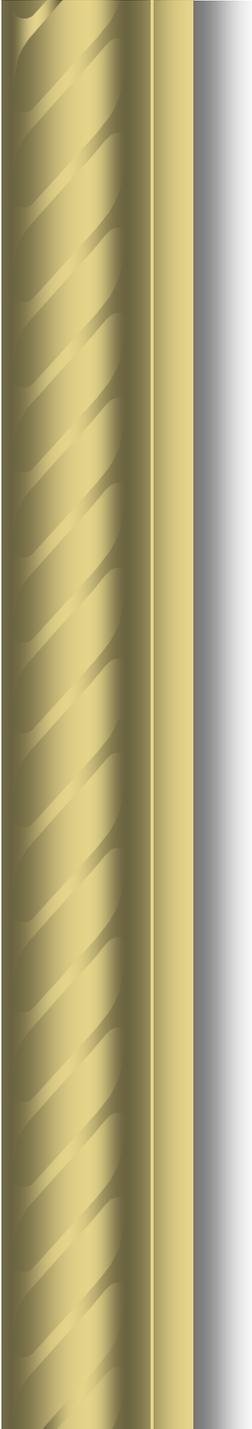
- Time sampling
- Injury prediction ability

- OWAS
- RULA
- Rodger's methodology
- Strain Index



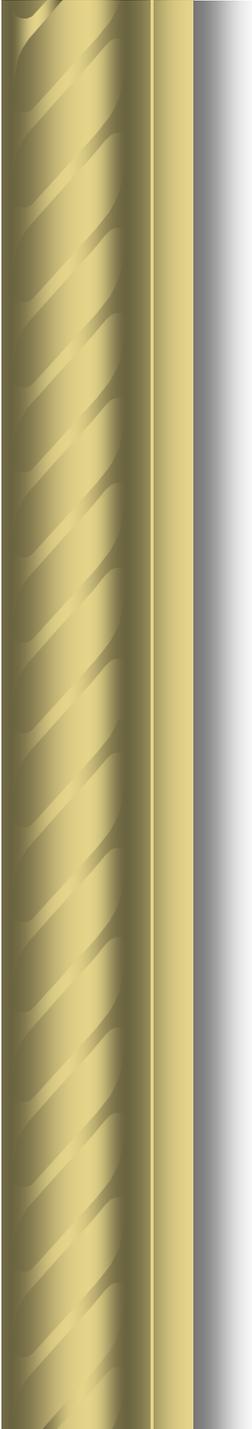
Work Organization Work Culture

- **Predictors of:**
 - Repeated problems
 - Long term disability
- **Organization / Culture Factors:**
 - Supervisor support & involvement
 - Work pressures
 - Worries
 - Social support
 - Problem solving / innovation
 - Coping style



Work Organization Work Culture

- **Implications for Return to Work / Single WMSD case**
- **Red Flag**
- **Intervention**
 - **External: Supervisor target**
 - Injury Tracking
 - **Internal**
 - Coping style
 - Problem solving
 - *PLUS: Smoking****



Program Evaluation

- **Program Assessment Checklist**
 - Tailor for local program
- **Leading (Process) Indicators**
 - Structure, process focused (e.g., time)
- **Lagging (Outcome) Indicators**
 - Incidence rate
 - Severity rate
 - Lost work time
 - Limited duty time



DOD Conference

***“Forging Ahead:
Preventing Work-Related
Musculoskeletal Injuries”***

5-6 November 2001

Marriot Westfield, Chantilly, VA

Web Site

*[http://chppm-
www.apgea.army.mil/ergowg/index.htm](http://chppm-www.apgea.army.mil/ergowg/index.htm)*

Questions??